

F. D. BUTTERFIELD.

H. S. HASKELL.

ILLUSTRATED CATALOGUE

— AND —

REVISED

PRICE LIST

— OF —

BLACKSMITHS' AND CARRIAGE-MAKERS' TOOLS,

STOCKS AND DIES,

— AND —

TAPS OF EVERY DESCRIPTION,

MANUFACTURED BY

BUTTERFIELD & CO.,

DERBY LINE,

ROCK ISLAND,

ORLEANS CO.,

PROVINCE QUEBEC,

VERMONT.

CANADA.



IN presenting this Illustrated Catalogue and Price List, it is with much satisfaction that we call attention to the many improvements and additions since our last publication.

We are now established in our new factory, which we recently constructed with particular reference to the wants of our business, and having fully supplied it with the most improved machinery especially adapted to our work, our facilities for the prompt execution of orders are greatly increased.

Acknowledging our obligations to our friends for their appreciation and encouragement of our efforts, and pledging ourselves to use every endeavor to sustain the reputation we have gained for superiority of quality and workmanship of our productions, we solicit their continued support.

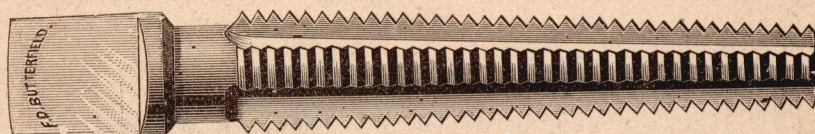
Respectfully,

BUTTERFIELD & CO.



BLACKSMITHS'

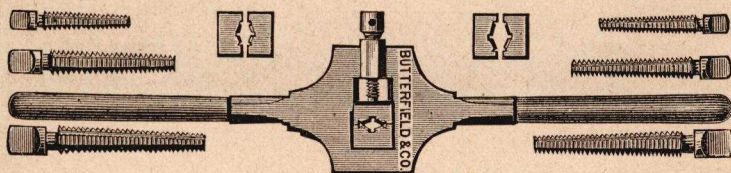
EXTRA TAPER AND PLUG TAPS.



PUT UP IN BOXES.

SIZE.	NUMBER OF THREADS TO INCH.				PRICE EACH.
	RIGHT.	Taps in each box	LEFT.	Taps in each box	
$\frac{1}{8}$ inch.	30 and 32.	6			30 Cents.
$\frac{3}{16}$ "	24 and 26.	6			30 "
$\frac{1}{4}$ "	18, 20, 22, 24 and 26.	6			30 "
$\frac{5}{16}$ "	16, 18, 20 and 22.	6			30 "
$\frac{3}{8}$ "	12, 14, 16 and 18.	6			35 "
$\frac{7}{16}$ "	12, 14, 16 and 18.	6	14.	6	40 "
$\frac{1}{2}$ "	12, 14 and 16.	6	12 and 14.	4	40 "
$\frac{9}{16}$ "	12 and 14.	6	12.	4	50 "
$\frac{5}{8}$ "	10, 11, 12 and 14.	6	10 and 12.	4	50 "
$\frac{3}{4}$ "	8, 9, 10 and 12.	6	10 and 12.	4	65 "
$\frac{7}{8}$ "	9 and 10.	4	9.	4	90 "
1 "	7, 8, and 9.	2	8 and 9.	2	1 25 "
$1\frac{1}{4}$ "	6, 7, 8 and 9.	2	8 and 9.	2	1 75 "
$1\frac{1}{2}$ "	6, 7 and 8.	2	6, 7 and 8.	2	3 00 "

➤ BLACKSMITHS' STOCKS ➤ AND DIES.



No.			
1.	Cuts 2 in. to 1 in. Right Hand, $4\frac{1}{2}$ and 7 threads to in.		
	" 2 " 1 " Left " $4\frac{1}{2}$ and 7 " "	\$60 00	
	8 Taps and 4 pair of Dies.		
2.	Cuts 2 in. to $\frac{7}{8}$ in. Rt. Hand $4\frac{1}{2}$, 6, 7 and 8 threads to in.	60 00	
	8 Taps and 4 pair of Dies.		
3.	Cuts $1\frac{3}{4}$ in. to $\frac{7}{8}$ in. Right Hand, 6 and 8 threads to in.	45 00	
	" $1\frac{3}{4}$ " $\frac{7}{8}$ " Left " 6 and 8 " "		
	8 Taps and 4 pair of Dies.		
4.	Cuts $1\frac{3}{4}$ in. to $\frac{3}{4}$ in. Rt. Hand, 6, 7, 8 and 9 threads to in.	45 00	
	8 Taps and 4 pair of Dies.		
5.	Cuts $1\frac{1}{2}$ to $\frac{3}{4}$ in. Rt. Hand, 8 and 9 threads to the inch.	35 00	
	" $1\frac{1}{2}$ " $\frac{3}{4}$ " Left " 8 and 9 " "		
	8 Taps and 4 pair of Dies.		
5 $\frac{1}{2}$.	Cuts $1\frac{1}{2}$ to $\frac{3}{4}$ in. Rt. Hand, 6, 7, 8 and 9 threads to the in.	35 00	
	8 Taps and 4 pair of Dies.		
7.	Cuts $1\frac{1}{4}$ in. to $\frac{5}{8}$ in. Right Hand, 8 and 10 threads to in.	12 00	
	" $1\frac{1}{4}$ " $\frac{5}{8}$ " Left " 8 " "		
	6 Taps and 3 pair of Dies.		
9.	Cuts $1\frac{1}{4}$ in. to $\frac{1}{2}$ in. Rt. Hand, 8, 10 and 12 threads to in.	12 00	
	6 Taps and 3 pair of Dies.		
17.	Cuts 1 in. to $\frac{1}{2}$ in. Right Hand, 9 and 12 threads to in.	9 00	
	" 1 " $\frac{1}{2}$ " Left " 9 " "		
	6 Taps and 3 pair of Dies.		
19.	Cuts 1 in. to $\frac{5}{8}$ in. Rt. Hand, 9, 12 and 14 threads to in.	9 00	
	6 Taps and 3 pair of Dies.		
25.	Cuts $\frac{3}{4}$ in. to $\frac{5}{8}$ in. Right Hand, 10 and 16 threads to in.	6 50	
	" $\frac{3}{4}$ " $\frac{5}{8}$ " Left " 10 " "		
	6 Taps and 3 pair of Dies.		
27.	Cuts $\frac{3}{4}$ in. to $\frac{3}{8}$ in. Rt. Hand, 10, 12 and 16 threads to in.	6 50	
	6 Taps and 3 pair of Dies.		
45.	Cuts $\frac{5}{8}$ in. to $\frac{5}{16}$ in. Right Hand, 12 and 16 threads to in.	5 50	
	" $\frac{5}{8}$ " $\frac{5}{16}$ " Left " 12 " "		
	6 Taps and 3 pair of Dies.		
47.	Cuts $\frac{5}{8}$ in. to $\frac{1}{4}$ in. Rt. Hand, 12, 14 and 18 threads to in.	5 50	
	6 Taps and 3 pair of Dies.		
49.	Cuts $\frac{1}{2}$ in. to $\frac{1}{16}$ in. Right Hand, 14 and 18 threads to in.	4 50	
	" $\frac{1}{2}$ " $\frac{1}{16}$ " Left " 14 " "		
	6 Taps and 3 pair of Dies.		
51.	Cuts $\frac{1}{2}$ in. to $\frac{3}{16}$ in. Rt. Hand, 14, 18 and 22 threads to in.	4 50	
	6 Taps and 3 pair of Dies.		

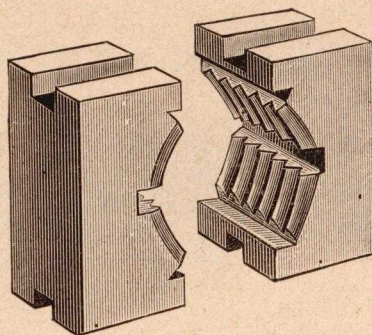
BLACKSMITHS' STOCKS AND DIES,

(CONTINUED).

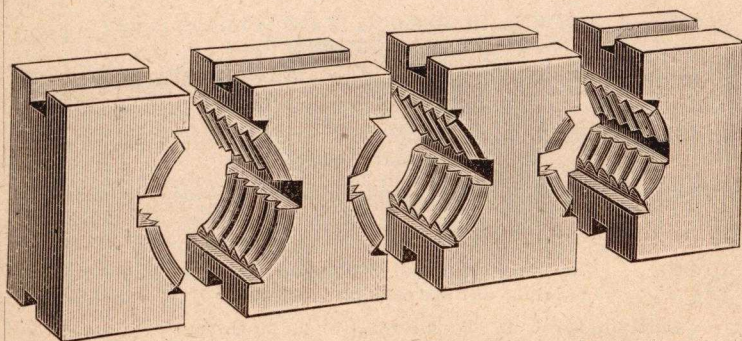


No.					
6.	{ Cuts $1\frac{1}{2}$ to 1 in.	Right Hand, 8 threads to the inch.	}	\$20 00	
	{ " $1\frac{1}{2}$ " 1 "	Left " 8 " "			
		4 Taps and 2 sets of Dies.			
11.	{ Cuts $1\frac{1}{4}$ to $\frac{5}{8}$ in.	Right Hand, 8 and 10 threads to in.	}	10 00	
	{ " $1\frac{1}{4}$ " $\frac{5}{8}$ "	Left " 8 " "			
		4 Taps and 3 sets of Dies.			
15.	{ Cuts $1\frac{1}{4}$ to $\frac{1}{2}$ in.	Rt. Hand, 8, 10 and 12 threads to in.	}	10 00	
		5 Taps and 3 sets of Dies.			
21.	{ Cuts 1 in. to $\frac{1}{4}$ in.	Right Hand, 9 and 12 threads to in.	}	6 00	
	{ " 1 " $\frac{1}{4}$ "	Left " 9 " "			
		4 Taps and 3 sets of Dies.			
23.	{ Cuts 1 in. to $\frac{3}{8}$ in.	Rt. Hand, 9, 10 and 14 threads to in.	}	5 00	
		3 Taps and 3 sets of Dies.			
32.	{ Cuts $\frac{3}{4}$ in. to $\frac{3}{8}$ in.	Right Hand, 10 and 14 threads to in.	}	5 00	
	{ " $\frac{3}{4}$ " $\frac{3}{8}$ "	Left " 10 and 14 " "			
		4 Taps and 4 sets of Dies.			
33.	{ Cuts $\frac{3}{4}$ in. to $\frac{1}{2}$ in.	Right Hand, 10 threads to the inch.	}	4 00	
	{ " $\frac{3}{4}$ " $\frac{1}{2}$ "	Left " 10 " "			
		2 Taps and 2 sets of Dies.			
34.	{ Cuts $\frac{3}{4}$ in. to $\frac{5}{16}$ in.	Rt. Hand, 10, 12 and 16 threads to in.	}	4 50	
		3 Taps and 3 sets of Dies.			
35.	{ Cuts $\frac{3}{4}$ in. to $\frac{3}{8}$ in.	Right Hand, 10 and 14 threads to in.	}	4 00	
		2 Taps and 2 sets of Dies.			
37.	{ Cuts $\frac{5}{8}$ in. to $\frac{3}{16}$ in.	Rt. Hand, 14, 18 and 22 thrds. to in.	}	4 25	
		6 Taps and 3 sets of Dies.			
38.	{ Cuts $\frac{5}{8}$ in. to $\frac{5}{16}$ in.	Right Hand, 12 and 18 threads to in.	}	4 50	
	{ " $\frac{5}{8}$ " $\frac{5}{16}$ "	Left " 12 " "			
		6 Taps and 3 sets of Dies.			
41.	{ Cuts $\frac{1}{2}$ in. to $\frac{1}{8}$ in.	Rt. Hand, 16, 20 and 26 thrds. to in.	}	3 25	
		6 Taps and 3 sets of Dies.			
42.	{ Cuts $\frac{1}{2}$ in. to $\frac{3}{16}$ in.	Right Hand, 14 and 20 threads to in.	}	3 50	
	{ " $\frac{1}{2}$ " $\frac{3}{16}$ "	Left " 14 " "			
		6 Taps and 3 sets of Dies.			
53.	{ Cuts $\frac{5}{16}$ in. to $\frac{1}{16}$ in.	Rt. Hand, 16, 20, 24 and 32 thrds. in.	}	2 75	
		4 Taps and 4 sets of Dies.			

PRICES OF EXTRA DIES.



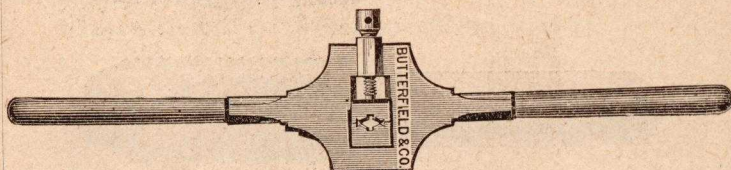
For No.	1	or	2	Stock,	-	-	-	-	-	-	\$12 00
" "	3	"	4	"	-	-	-	-	-	-	10 00
" "	5	"	5½	"	-	-	-	-	-	-	8 00
" "	6	"	"	"	-	-	-	-	-	-	6 00
" "	7	"	9	"	-	-	-	-	-	-	3 50
" "	11	"	15	"	-	-	-	-	-	-	3 00
" "	17	"	19	"	-	-	-	-	-	-	2 50
" "	21	"	23	"	-	-	-	-	-	-	2 00
" "	25, 27,	"	32	"	-	-	-	-	-	-	2 25
" "	33	"	"	"	-	-	-	-	-	-	1 50
" "	34	"	"	"	-	-	-	-	-	-	2 00
" "	35, 37, 38, 41, 42	Stock,	"	"	-	-	-	-	-	-	1 50
" "	45 or 47	"	"	"	-	-	-	-	-	-	2 25
" "	49	"	51	"	-	-	-	-	-	-	2 00
" "	53	"	"	"	-	-	-	-	-	-	1 50



In ordering new dies, the best way is to send us an old die by mail, unless it is preferred to send the stock.

New dies sent by mail at our risk.

MACHINISTS' STOCKS AND DIES.



No. 1, with 5 prs. Dies, cutting	$\frac{1}{4}$, 20; $\frac{5}{16}$, 18; $\frac{3}{8}$, 16; $\frac{7}{16}$, 14; $\frac{1}{2}$, 12;	\$7 00
" 2, " 4 " " "	$\frac{7}{16}$, 14; $\frac{1}{2}$, 12; $\frac{5}{8}$, 11; $\frac{3}{4}$, 10;	- 8 00
" 3, " 4 " " "	$\frac{5}{8}$, 11; $\frac{3}{4}$, 10; $\frac{7}{8}$, 9; 1, 8; - - -	10 00
" 4, " 4 " " "	$\frac{3}{4}$, 10; $\frac{7}{8}$, 9; 1, 8; $1\frac{1}{4}$, 7; - - -	13 00

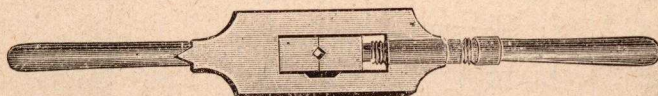
The above prices do not include Taps.

In ordering, state whether Plug or Taper Taps are required.

For price of Taps, see next page.

Extra Dies for No. 1 Plate, \$1 00	Extra Dies for No. 2 Plate, \$1 25
" " 3 " 1 75	" " 4 " 2 00

TAP WRENCHES.



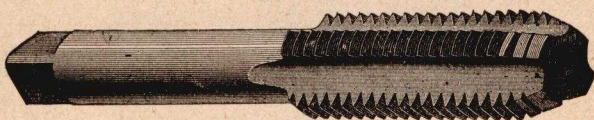
These Wrenches are well finished in every respect, have Steel Dies, and are strong and durable.

No. 1, 8 inches long, fitting Taps	$\frac{1}{8}$ to $\frac{3}{8}$ inch, - - -	\$1 50
" 2, 12 inches long, " "	$\frac{1}{4}$ to $\frac{5}{8}$ " - - -	2 00
" 3, 14 inches long, " "	$\frac{1}{2}$ to $\frac{7}{8}$ " - - -	3 00
" 4, 17 inches long, " "	$\frac{3}{4}$ to $1\frac{1}{4}$ " - - -	4 00
" 5, 24 inches long, " "	$\frac{7}{8}$ to $1\frac{1}{2}$ " - - -	5 25

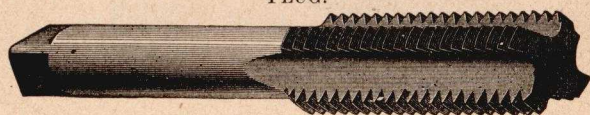
RELIEVED.



TAPER.



PLUG.



BOTTOMING.

Sets of Machinists' Hand Taps.

V AND FRANKLIN INSTITUTE SHAPE OF THREAD.

Unless advised to the contrary, we fill orders with the V Threads.

	Diameter.	No. Threads to inch.	Price Each.	Price per Set.
3 Taps to Set—Taper, Plug and Bottoming.	1-4	16, 18 & 20	\$0 45	\$1 35
	5-16	16 & 18	50	1 50
	3-8	14, 16 & 18	55	1 65
	7-16	14 & 16	60	1 80
	1-2	12, 13 & 14	70	2 10
	9-16	12 & 14	80	2 40
	5-8	10, 11 & 12	90	2 70
	11-16	11 & 12	1 05	3 15
	3-4	10 & 12	1 20	3 60
	13-16	10	1 40	4 20
	7-8	9 & 10	1 60	4 80
	15-16	9	1 80	5 40
	1	8	2 00	6 00
	1 1-8	7 & 8	2 25	6 75
	1 1-4	7	2 60	7 80
	1 3-8	6	3 00	9 00
	1 1-2	6	3 50	10 50
	1 5-8	5 & 5½	4 20	12 60
	1 3-4	5	5 00	15 00
	1 7-8	4½ & 5	5 80	17 40
	2	4½	6 70	20 10

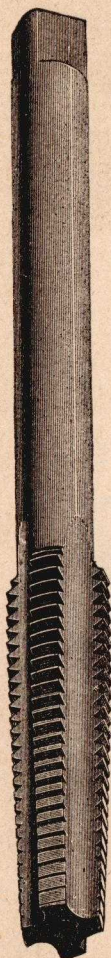
We keep in stock the above; also $\frac{1}{64}$ and $\frac{1}{32}$ over size up to $\frac{1}{2}$ and $\frac{1}{32}$ oversize above $\frac{1}{2}$.

MACHINE OR NUT TAPS.

V AND FRANKLIN INSTITUTE SHAPE OF THREAD.

LONG SHANK.—RELIEVED.

Unless advised to the contrary, we fill orders with V threads.



Diameter.	No. Threads to Inch.	Price Each.
1-4	16, 18 & 20	\$0 60
5-16	16 & 18	70
3-8	14 & 16	80
7-16	12, 14 & 16	90
1-2	12, 13 & 14	1 00
9-16	12 & 14	1 15
5-8	10, 11 & 12	1 30
11-16	11 & 12	1 45
3-4	10	1 60
13-16	10	1 80
7-8	9 & 10	2 10
15-16	9	2 40
1	8	2 80
1 1-8	7 & 8	3 20
1 1-4	7 & 8	3 70
1 3-8	6	4 20
1 1-2	6	4 70
1 5-8	5 & 5½	5 30
1 3-4	5	6 00
1 7-8	4½ & 5	6 80
2	4½	7 70

We keep in stock the above, and 1-32 over size for rough iron.

In ordering, always state exact diameter and thread wanted.

When exact duplicates are wanted, special orders should always be accompanied by a stub with a nut fitting same.

Machine or Nut Taps.—Continued.

V AND FRANKLIN INSTITUTE SHAPE OF THREAD.

LONG SHANK.—RELIEVED.

Unless advised to the contrary, we fill orders with V threads.

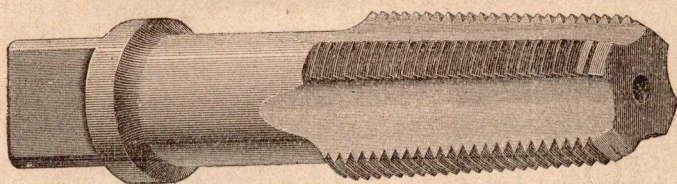


Diameter.	No. Threads to Inch.	Price Each.
2 1-8	4 1-2	\$ 9 00
2 1-4	4 1-2	10 20
2 3-8	4 1-2	11 50
2 1-2	4	12 50
2 5-8	4	14 00
2 3-4	4	15 00
2 7-8	4	16 50
3	3 1-2	18 00
3 1-8		19 75
3 1-4	3 1-2	21 50
3 3-8		23 00
3 1-2	3 1-4	25 00
3 5-8		27 00
3 3-4	3	29 50
3 7-8		31 00
4	3	33 50

We keep in stock the above, and 1-32 over size for rough iron.
In ordering, always state exact diameter and thread wanted.

When exact duplicates are wanted, special orders should always
be accompanied by a stub with a nut fitting same.

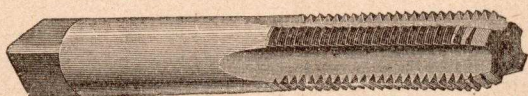
Pipe-Taps and Reamers.



Pipe-Taps, with right or left-hand threads, and reamers are made of the following sizes and kept in stock. Pipe-hobs, 1-8 to 6-inch diameter, are furnished to order at special prices.

Diameter.	Price.	Diameter.	Price.	Diameter.	Price.
1 inch,	\$1 12	1 inch,	\$3 12	2½ inch,	\$10 50
1 inch,	1 25	1¼ inch,	3 75	3 inch,	15 00
1 inch,	1 50	1½ inch,	4 62	3½ inch,	22 00
1 inch,	1 87	2 inch,	6 25	4 inch,	33 00
1 inch,	2 50				

Taps for Machine Screws.



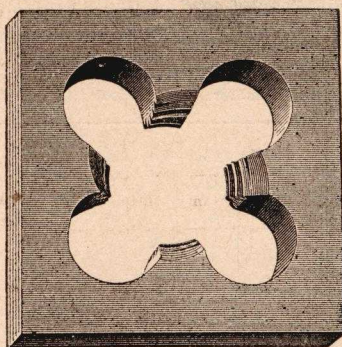
Made of Stubbs' steel wire, accurately cut, finely finished and well tempered. Less than six of one size will be charged as single taps.

Diameter.	Wire Gauge Size.	No. Threads to Inch.	PRICE.	
			Each.	Per Doz.
7-64	No. 4	32, 36 & 40	\$0 35	\$4 00
9-64	" 6	30, 32, 36 & 40	35	4 00
1-8	" —	30, 32, 36 & 48	35	4 00
5-32	" 8	30, 32 & 36	35	4 00
3-16	" 10	20, 22, 24, 30 & 32	35	4 00
7-32	" 12	20, 22 & 24	35	4 00
1-4	" 14	16, 18, 20, 22 & 24	38	4 40
17-64	" 16	16, 18, 20 & 22	38	4 40
9-32	" 18	16, 18 & 20	38	4 40
5-16	" 20	16, 18 & 20	45	5 30
3-8	" 24	14, 16 & 18	45	5 30

MACHINE

—OR—

SOLID BOLT DIES.



Diameter.	No. Threads to Inch.	Size of Square.	Price Each.
1-4	20	$2\frac{1}{2}$	\$1 80
5-16	18	$2\frac{1}{2}$	1 80
3-8	16	$2\frac{1}{2}$	1 80
7-16	14	$2\frac{1}{2}$	1 80
1-2	12	$2\frac{1}{2}$	1 80
5-8	11	$2\frac{1}{2}$	2 00
3-4	10	$2\frac{1}{2}$	2 25
7-8	9	$2\frac{1}{2}$	2 49
1	8	$2\frac{1}{2}$	2 70
1 1-8	7	$2\frac{1}{2}$	3 00
1 1-4	7	$2\frac{1}{2}$	3 30
1 3-8	6	$2\frac{1}{2}$	3 60
1 1-2	6	3	3 90
1 5-8	$5\frac{1}{2}$	3	4 20
1 3-4	5	3 and $1\frac{1}{4}$ in. thick.	5 40
1 7-8	5	$3\frac{1}{2}$ and $1\frac{1}{2}$ "	6 50
2	$4\frac{1}{2}$	$3\frac{3}{4}$ and 2 "	7 50



PULLEY TAPS,

With sharp **V** and U. S. S. thread, of the following sizes, are kept in stock. Other sizes and threads are made to order and furnished at special prices.

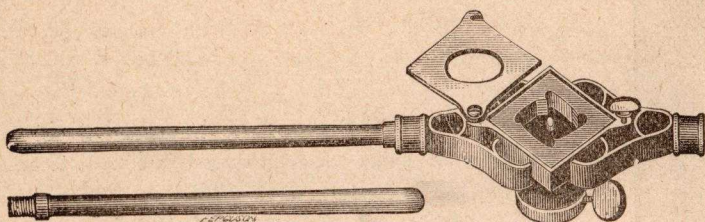
Diameter.	PITCH.	PRICES.						
		6 in.	8 in.	10 in.	12 in.	14 in.	16 in.	18 in.
$\frac{3}{8}$	14, 16,	80 c.	\$0 90	\$1 10	\$	\$	\$	\$
$\frac{7}{16}$	14, 16,	90 c.	1 00	1 20				
$\frac{1}{2}$	12, 13,			1 40	1 50	1 60		
$\frac{5}{8}$	10, 11,			1 50	1 60	1 75	1 90	
$\frac{3}{4}$	10,				1 80	2 10	2 30	2 50

Stay-Bolt Taps for Boiler Makers.

DIAMETER.	PRICE.						
	16 in.	18 in.	24 in.	30 in.	36 in.	42 in.	54 in.
$\frac{3}{4}$, $\frac{13}{16}$ & $\frac{1}{2}$ in.	\$5 60	7 20	8 80	13 00	15 00	18 00	20 00
$\frac{13}{16}$ & 1 in.	\$6 60	8 50	10 20	14 25	16 50	19 75	22 25

SOLID DIE PLATES,

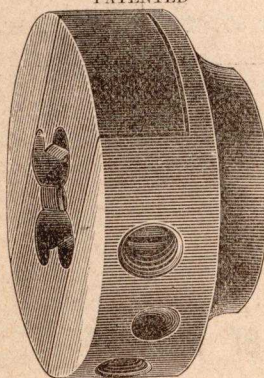
For Cutting Steam, Gas and Water Pipes.



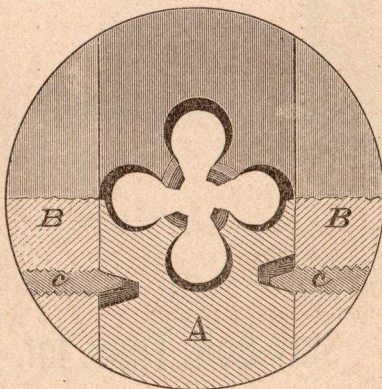
Numbers.....	0	1	1½	1¾	² With Lead- er Screws.
Dies furnished with each Plate.....	$\frac{1}{2}$ to $\frac{1}{2}$	$\frac{1}{4}$ to 1	$\frac{3}{4}$, 1 & 1½	1, 1½ & 1¾	1½, 1¾ & 2
Dimensions of Dies.....In.	2 x ½	2½ x ¾	3 x ¾	3 x ¾	4 x ¾
Die Plates with R. H. Dies complete,	\$9 50	\$15 00	\$13 50	\$13 50	\$20 00
Die Plates without Dies.....	3 50	5 00	6 00	6 00	9 50
Extra Dies, Right or Left Hand.....	1 50	2 00	2 50	2 50	3 50
Extra Bushings, each.....	25	35	45	45	60
Die Frames, each.....		30	40	40	50

Patent Adjustable Dies.

PATENTED



Die in Screw Plate Collet.

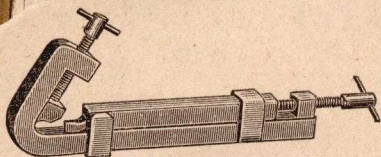


Sectional View of Die and Collet.

JANUARY 29, 1878.

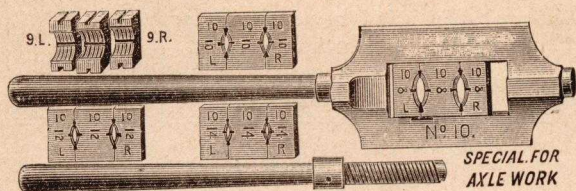
A represents the die, which is in two pieces; each piece is held in place and adjusted by the screws CC. B represents the Collet. It will be seen that the holes for the screws in the Collet (B.) are opposite, but the holes in the die are not opposite, and are larger than the point of the screw, so that one screw holds the die from moving forward and the other from moving backward; both screws impinge on the lower side of the holes, so that when both screws are tight they prevent the die from moving. In this way we make use of the screw and wedge; it is doubtful if there can be a more simple and secure way of holding and adjusting dies. To adjust the die loosen one screw and tighten the other according to the direction it is desired to move it.

Young's New Axle Cutter.



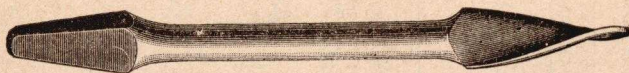
For preventing the disagreeable wobbling of wheels on axles when worn.

Price, with Special Screw Plate, illustrated below, \$25.00.



*SPECIAL FOR
AXLE WORK*

Lightning Tapping Bits.



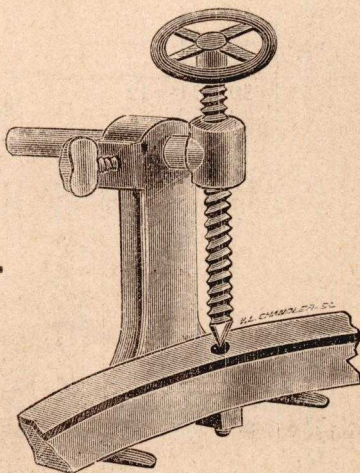
For Tapping Sugar Trees.

Price \$6.00 per Dozen.

ADJUSTABLE

Bolt Holder, Pole and Thill Coupler.

Price, \$15.00 per Dozen.



Adjustable for putting Rubbers in Pole and Thill Couplings and holding Tire and other Bolts.

TAP DRILLS.

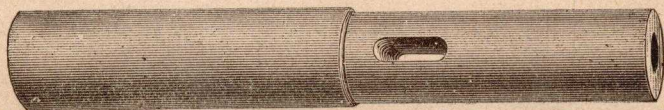
The following table, showing the different sizes of Drills that should be used when a full thread is to be tapped in a hole, is practically correct.

Diameter of Tap.	No. of Threads to Inch.			Drill for V Thread.	Drill for U. S. S. Thread.	Drill for Whitworth Thread.
$\frac{1}{4}$	16	18	20	$\frac{5}{32}$		$\frac{3}{16}$
$\frac{9}{32}$	16	18	20	$\frac{5}{32}$		$\frac{3}{16}$
$\frac{1}{2}$	16	18		$\frac{1}{2}$		$\frac{15}{64}$
$\frac{5}{8}$	16	18		$\frac{1}{2}$		$\frac{15}{64}$
$\frac{3}{4}$	14	16	18	$\frac{1}{2}$	$\frac{9}{32}$	$\frac{9}{32}$
$\frac{7}{8}$	14	16	18	$\frac{1}{2}$	$\frac{9}{32}$	$\frac{9}{32}$
1	14	16		$\frac{1}{2}$	$\frac{11}{32}$	$\frac{11}{32}$
$1\frac{1}{8}$	12	13	14	$\frac{1}{2}$	$\frac{13}{32}$	$\frac{13}{32}$
$1\frac{1}{4}$	12	13	14	$\frac{1}{2}$	$\frac{13}{32}$	$\frac{13}{32}$
$1\frac{3}{8}$	12	14		$\frac{1}{2}$	$\frac{7}{16}$	
$1\frac{1}{2}$	12	14		$\frac{1}{2}$	$\frac{7}{16}$	
$1\frac{5}{8}$	10	11	12	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$1\frac{3}{4}$	10	11	12	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$1\frac{7}{8}$	10	11	12	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
2	10	11	12	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$2\frac{1}{8}$	9	10		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$2\frac{1}{4}$	9	10		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$2\frac{3}{8}$	8			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$2\frac{1}{2}$	8			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$2\frac{7}{8}$	7	8		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
3	7	8		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$3\frac{1}{8}$	7			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$3\frac{1}{4}$	7			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$3\frac{3}{8}$	6			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$3\frac{1}{2}$	6			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$3\frac{3}{4}$	6			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
4	5	$5\frac{1}{2}$		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$4\frac{1}{8}$	5	$5\frac{1}{2}$		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$4\frac{1}{4}$	5			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$4\frac{3}{8}$	5			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$4\frac{1}{2}$	4 $\frac{1}{2}$	5		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
$4\frac{3}{4}$	4 $\frac{1}{2}$	5		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
5	4 $\frac{1}{2}$			$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

	Diam.	Length.	Price Each.	Socket		Diam.	Length.	Price Each.	Socket
	1 1/4	6 1/2	\$0.70	No. 1, \$1.20.	1 3/2	14 1/2	\$5.35	No. 4, \$4.00.	
	3 1/2	6 1/4	0.75		1 1/2	14 1/4	5.52		
	5 1/6	6 3/8	0.80		1 1/2	14 3/8	5.75		
	1 3/8	6 3/4	0.86		1 1/2	14 1/2	6.00		
	1 3/8	6 3/4	0.92		1 1/2	14 3/4	6.20		
	1 3/8	7	0.98		1 1/2	14 3/4	6.45		
	1 3/8	7 1/4	1.05		1 1/2	15	6.67		
	1 3/8	7 1/2	1.10		1 1/2	15	6.90		
	1 3/8	7 1/2	1.15		1 1/2	15 1/4	7.25		
	1 3/8	8	1.27		1 1/2	15 1/4	7.60		
	1 3/8	8 1/4	1.38	1 1/2	15 3/8	7.95			
	1 3/8	8 1/2	1.50	1 1/2	15 3/8	8.30			
	1 3/8	8 3/4	1.60	1 1/2	15 3/8	8.65			
	1 3/8	9	1.73	1 1/2	15 3/8	8.97			
	1 3/8	9 1/4	1.85	No. 2, \$1.80.	1 1/2	15 3/8	9.33	No. 5, \$7.50.	
	1 3/8	9 1/2	1.95		1 1/2	16	9.66		
	1 3/8	9 3/4	2.13		1 1/2	16 1/4	9.90		
	1 3/8	9 1/2	2.30		1 1/2	16 1/4	10.12		
	1 3/8	10	2.50		1 1/2	16 3/8	10.35		
	1 3/8	10 1/4	2.65		1 1/2	16 3/8	10.58		
	1 3/8	10 1/2	2.82		1 1/2	16 1/2	10.75		
	1 3/8	10 3/8	3.00		1 1/2	16 1/2	10.95		
	1 3/8	10 3/4	3.15		1 1/2	16 1/2	11.10		
	1 3/8	10 1/2	3.35		2	16 1/2	11.27		
	1 3/8	11	3.45	2	16 1/2	11.75			
	1 3/8	11 1/4	3.68	No. 3, \$2.50.	2 1/2	17	12.20		
	1 3/8	11 1/4	3.90		2 1/2	17	12.90		
	1 3/8	11 1/2	4.15		2 1/2	17	13.80		
1 3/8	11 3/4	4.37	2 1/2		17 1/2	14.75			
1 3/8	11 3/4	4.60	2 1/2		17 1/2	15.65			
1 3/8	12	4.83	2 1/2		18	16.55			
1 3/8	12 1/8	5.00	2 1/2		18 1/4	17.25			
1 3/8	12 1/4	5.20	2 1/2		19	17.95			

Drills of any size or length, with Taper or Straight Shanks,
made to order, and to fit any socket desired.
The above are the "Morse" Taper.

Steel Sockets for Taper Shank Drills.



Straight Shank Drills



Diam. of Drills.	Length in Inches.	Price per Dozen.	Price Each.
1	2 1/2	\$1.15	10
1 1/8	2 3/4	1.27	12
1 1/4	2 3/4	1.38	13
1 3/8	2 3/4	1.50	14
1 1/2	3	1.67	15
1 5/8	3 1/8	1.85	17
1 3/4	3 1/4	2.07	20
1 7/8	3 3/8	2.30	22
2	3 1/2	2.53	24
2 1/8	3 3/4	2.75	25
2 1/4	3 3/4	3.05	28
2 3/8	3 7/8	3.34	30
2 1/2	4	3.63	32
2 5/8	4 1/4	3.90	35
2 3/4	4 1/4	4.20	38
2 7/8	4 1/2	4.50	40
3	4 1/2	4.83	42
3 1/8	4 3/4	5.20	46
3 1/4	4 3/4	5.50	50
3 3/8	4 1/2	5.86	58
3 1/2	5	6.20	60
3 5/8	5 1/8	6.55	62
3 3/4	5 1/4	6.90	65
3 7/8	5 1/2	7.36	68
4	5 3/4	7.82	71
4 1/8	5 3/4	8.28	75
4 1/4	5 3/4	8.60	77
4 3/8	5 3/4	8.90	80
4 1/2	6	9.20	85

DRILLS FITTING THE

Prentice or Worcester Blacksmiths' Drill Press.



Diameter.	Length.	Price Each.	Diameter.	Length.	Price Each.
1/4	5 1/2 inch.	\$.50	7/16	7 1/4 inch.	\$1.05
3/8	5 3/8 "	.50	1/2	7 1/2 "	1.10
1/2	5 1/2 "	.60	3/4	7 3/4 "	1.15
5/8	5 7/8 "	.65	1	8 "	1.25
3/4	6 1/8 "	.70	1 1/8	8 1/4 "	1.40
7/8	6 1/4 "	.75	1 1/4	8 1/2 "	1.50
1	6 3/8 "	.80	1 1/2	8 3/4 "	1.60
1 1/8	6 1/2 "	.85	1 3/4	9 "	1.75
1 1/4	6 3/4 "	.90	2	9 1/4 "	1.85
1 1/2	7 "	.95	2 1/4	9 3/4 "	2.10

The above Drills have Shanks 2 1/2 in. long, and 1/2 in. diameter, fitting Press Nos. 1, 1 1/2, 2, 6, 7, 8, 9, and Boss Upright, 2 and 4 Horizontal.

Taper Reamers for Bit Brace.

Prices Reduced.

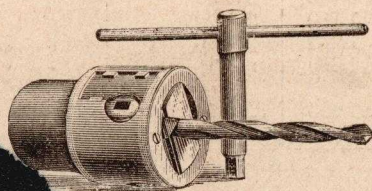


	OLD PRICES.	NEW PRICES.
$\frac{1}{4}$ inch.....	\$5 40 per dozen.....	\$3 00 per dozen.
5-16 ".....	6 00 " ".....	3 60 " ".....
$\frac{3}{16}$ ".....	6 60 " ".....	4 20 " ".....
7-16 ".....	7 20 " ".....	4 80 " ".....
$\frac{1}{2}$ ".....	8 40 " ".....	5 40 " ".....
9-16 ".....	9 60 " ".....	6 60 " ".....
$\frac{5}{8}$ ".....	10 80 " ".....	7 80 " ".....
11-16 ".....	12 60 " ".....	9 00 " ".....
$\frac{3}{4}$ ".....	14 40 " ".....	9 60 " ".....
Set of five, $\frac{1}{4}$ to $\frac{1}{2}$ inch, inclusive.....		\$1 75
Case extra.....		25
Set of nine, $\frac{1}{4}$ to $\frac{3}{4}$ inch, inclusive.....		4 50
Case extra.....		50

Each Reamer tapers $\frac{1}{8}$ of an inch, and will cut iron or wood making a true, round hole. They are carefully made, and when properly used will do a surprising amount of work.

SELF-CENTERING

LITTLE GIANT DRILL CHUCK.



Chucks, and having used them for several years, we heartily recommend them as the best of their kind. The jaws are of steel, operated with a key,

and they shut down to absolutely nothing.

By using them, parties can save the original cost in a large measure, by using Straight Shank Drills where they now use Taper Shanks.

No. 1 holds from 0 to $\frac{1}{2}$ inch..... Price, \$9 00
 No. 2 holds from 0 to 1 inch..... " 10 00

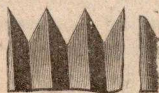
A SYSTEM OF

BOLTS AND NUTS,

As recommended by the Franklin Institute, of Philadelphia,
December 15, 1864.

Diameter of Bolt.	No. of Threads per Inch.	Diameter of Hole in Nut.	Short Diameter of Nut.*	Diameter of Bolt.	No. of Threads per Inch.	Diameter of Hole in Nut.	Short Diameter of Nut.*
1	20	.185	3 1/4	2	4 1/2	1.712	3 1/4
1 1/8	18	.240	3 1/4	2 1/4	4 1/2	1.962	3 1/4
1 1/4	16	.294	3 1/4	2 3/4	4	2.175	3 1/4
1 3/8	14	.344	3 1/4	3	4	2.425	3 1/4
1 1/2	13	.400	3 1/4	3 1/4	3 1/2	2.628	3 1/4
1 5/8	12	.454	3 1/4	3 1/2	3 1/2	2.878	3 1/4
1 3/4	11	.507	3 1/4	3 3/4	3 1/2	3.100	3 1/4
2	10	.620	3 1/4	4	3	3.317	3 1/4
2 1/8	9	.731	3 1/4	4 1/4	3	3.566	3 1/4
2 1/4	8	.837	3 1/4	4 3/4	2 1/2	3.825	3 1/4
2 3/8	7	.940	3 1/4	5	2 1/2	4.027	3 1/4
2 1/2	7	1.065	3 1/4	5 1/4	2 1/2	4.255	3 1/4
2 5/8	6	1.160	3 1/4	5 1/2	2 1/2	4.480	3 1/4
2 3/4	6	1.284	3 1/4	5 3/4	2 1/2	4.730	3 1/4
3	5 1/2	1.389	3 1/4	6	2 1/2	5.053	3 1/4
3 1/8	5	1.490	3 1/4		2 1/4	5.203	3 1/4
3 1/4	5	1.615	3 1/4		2 1/4	5.423	3 1/4

*Or Size of Wrench.



V Thread.

3 3/8
3 1/2
3 5/8
4
4 1/4
4 1/2
4 3/4
5
5 1/4
5 1/2
5 3/4
6

inch.	Price Each.
7 1/4	\$1.05
7 1/2	1.10
7 3/4	1.15
8	1.25
8 1/4	1.40
8 1/2	1
8 3/4	
9	